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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/331,189 11/29/99 HEINRICH U 016790/0376

FOLEY & LARDNER
3000 K STREET NW
SUITE 500
WASHINGTON DC 20007-5109

MM91/0622

EXAMINER

WINSTEDT, J

ART UNIT

PAPER NUMBER

2872

DATE MAILED:

06/22/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/331,189

Applicant(s)
Heinrich, Engelhardt

Examiner
J nnif r Winst dt

Group Art Unit
2872



☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 16-28 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 16-28 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on 11/29/99 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 3

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the optical system for image rotation being a prism (both a dove prism and an Abbe prism) and adjusting mechanism must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Specification

3. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.
4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

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Claim Rejections - 35 U.S.C. § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 16, 23, 24, and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 recites the limitation "the parallel path of rays" in line 4 of the claim. There is insufficient antecedent basis for this limitation in the claim. Also, the phrase "of a beam converging lens" in lines 3-4 of the claim is indefinite. It is uncertain if this phrase is just a description of the scanning mirror or is a different element that is also part of the claimed combination.

Claim 23 recites the limitation "the tube lens (3)" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim. Also, how can the optical system for image rotation be disposed between the tube lens (3) and objective (4) and still be disposed between a scanning lens (8) and a scanning mirror (9)? Looking at Figure 3 of the specification it is clear that both the tube lens (3) and objective (4) come before the scanning lens (8) and scanning mirror (9).

Claim 24 recites the limitation "the ocular (5)" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

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In claim 25, the phrase "a beam converging lens (7)" in line 3 of the claim is indefinite. A beam converging lens has already been recited above. It is uncertain whether or not the beam converging lens of line 3 is the same as the beam converging lens recited above.

Claim Rejections - 35 U.S.C. § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dixon et al. in view of Dewald et al.

Regarding claims 16 and 25, Dixon et al. discloses a confocal microscope (line 1, Abstract) with a scanning lens (202, Figure 2) and a scanning mirror (116, Figure 2), the scanning lens and the scanning mirror forming a beam converging lens in the parallel path of rays of the microscope (see Figure 2). Dixon et al. does not disclose the microscope having an optical system for image rotation disposed in the path of rays of the microscope, the optical system disposed between the scanning lens and the scanning mirror of the beam converging lens and serving to rotate all scanning and video images fed through a beam converging lens into the microscope. Dewald et al. discloses an optical system for image rotation disposed in a path of rays (20, Figure 2), characterized in that the optical system is disposed between a scanning lens

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(22, Figure 2) and a scanning mirror (16, Figure 2) and serves to rotate all scanning and video images fed through the device (see Figure 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include an optical system for image rotation disposed between the scanning lens and the scanning mirror in the confocal microscope of Dixon et al. and serving to rotate all scanning and video images fed into through the beam converging lens into the microscope as Dewald et al. suggests in order to maintain the image right side up (column 1, lines 45-46; Dewald et al.).

Regarding claims 17 and 18, the combination does not disclose the optical system for image rotation being configured as a dove prism. Dewald et al. discloses an optical system for image rotation that is configured as a dove prism (column 3, lines 13-15). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the optical system for image rotation of the combination be configured as a dove prism as Dewald et al. suggests in order to reduce the size of the optical system (column 3, lines 2-4; Dewald et al.).

Regarding claims 20, 21, and 22, the combination does not disclose the optical system for image rotation being a mirror system with an odd number of mirrors that is configured as a K mirror. Dewald et al. discloses an optical system for image rotation that is a mirror system with an odd number of mirrors that is configured as a K mirror (20, Figure 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the optical system for image rotation of the combination be a mirror system with an odd number of mirrors

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that is configured as a K mirror as Dewald et al. suggests in order to reduce the size of the optical system (column 3, lines 2-4; Dewald et al.).

Regarding claim 23, Dixon et al. in view of Dewald et al. discloses the claimed invention as described above except for the system for image rotation being disposed between the tube lens and objective. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the system for image rotation of Dixon et al. in view of Dewald et al. be disposed between the tube lens and objective, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Regarding claim 24, Dixon et al. in view of Dewald et al. discloses that the system for image rotation is disposed after the scan lens (20, 22, Figure 2; Dewald et al.).

Regarding claim 26, Dixon et al. in view of Dewald et al. discloses that the beam converging lens comprises a fixed thick beam splitter to avoid interferences (108, Figure 2; Dixon et al.). Dixon et al. in view of Dewald et al. does not disclose there being more than one beam splitter. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include more than one beam splitter in the converging lens of Dixon et al. in view of Dewald et al., since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Regarding claim 27, the combination discloses the claimed combination as described above except for an adjusting device being provided for minimizing the beam offset during

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rotation. Dewald et al. discloses an adjusting device (24, Figure 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include an adjusting device in the microscope of the combination as Dewald et al. suggests in order to have the beam go in a desired direction.

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dixon et al. in view of Dewald et al. as applied to claims 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, and 27 above, and further in view of Wasmund et al.

Regarding claim 19, Dixon et al. in view of Dewald et al. discloses the claimed invention except for the optical system for image rotation being a prism that is configured as an Abbe prism. Wasmund et al. discloses an optical system for image rotation that is a prism that is configured as an Abbe prism (69, Figure 5a). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the optical system for image rotation of Dixon et al. in view of Dewald et al. be a prism that is configured as an Abbe prism as Wasmund et al. suggests in order to control the beam (column 3, line 66 - column 4, line 2; Wasmund).

10. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dixon et al. in view of Dewald et al. as applied to claims 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, and 27 above, and further in view of Kapitza.

Regarding claim 28, Dixon et al. in view of Dewald et al. discloses the claimed invention as described above except for an axially movable objective or an axially movable objective turret being provided. Kapitza discloses an axially movable objective turret that is provided. It would

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have been obvious to one of ordinary skill in the art at the time the invention was made to provide an axially movable objective turret in the microscope of Dixon et al. in view of Dewald et al. as Kapitza suggests in order to be able to have more than one view of the object.

Conclusion

11. Any inquiry concerning the merits of this communication or earlier communications from the examiner should be directed to Jennifer Winstedt whose telephone number is (703) 305-0577. The fax number for the Group is (703) 308-7722 or 7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read 'Cassandra Spyrou', with a stylized, flowing script.

**Cassandra Spyrou
Supervisory Patent Examiner
Technology Center 2800**

JW

June 16, 2000